



SCALING UP WIND ENERGY IN MONGOLIA

International Conference

Organizer



Co-Organizer



The Corporate Hotel and Convention Center
Ulaanbaatar, Mongolia
Date: June 4-5, 2015

International Conference on Scaling Up Wind Energy in Mongolia

Renewable Energy Law Implementation, Grid Integration and Finance

4-5 June 2015

The Corporate Hotel and Convention Center, Ulaanbaatar, Mongolia

Organised by the Mongolian Wind Energy Association, Global Wind Energy Council

Co-Organizer: Global Green Growth Institute

Background

The Mongolian government is committed to exploiting the country's rich renewable energy resources to meet the rapidly growing energy demand, to improve energy security and to reduce dependence on electricity imports from Russia.

The Renewable Energy Law which was adopted in 2007 introduced a feed-in-tariff for wind power, currently set at USD \$ 8-9.5 cents/kWh. The latest progress to promote renewable energy was the parliament's approval of Mongolia's National Green Development Policy, where share of renewable energy is targeted to reach 20% by 2020 and 30% by 2030 from its current level, which is 5% (as of 2013). To meet these ambitious goals in the energy sector, Mongolian government has been working towards improvement of existing laws and regulations to address issues related to implementation of renewable energy. The total electricity production is expected to rise to 1700 MW, which means adding at least 400 MW of renewable energy by 2020. There are also discussions about making Mongolia's vast RE resources available to a broader East Asian market hungry for clean electricity.

In the past two years, the government has signed seven PPAs for wind projects. Mongolia's first wind project, the 50 MW Salkhit wind farm, came on line in the summer of 2013. As the industry starts to take off, the establishment of technical standards, a functioning market and system operator along with clarification of the legal framework have become necessary.

The key issues holding back investment in the sector concern priority dispatch, which is obliged by the renewable energy law, and grid curtailment. The lack of balancing power and flexible dispatch management make grid curtailment a critical challenge facing the sector.

The government is currently seeking solutions for these problems. While it has improved the curtailment situation, work needs to be done on how this is dealt with legally and contractually.

While the Ministry of Energy is working on implementation of the law and testing new technical solutions for the grid, it is an ideal time to transfer knowledge by showing best practice and technical solutions from mature wind markets who have dealt with similar problems. This would help boosting investment in the sector and meeting the objectives set in the renewable energy law.

Objectives

There are several aspects of the Renewable Energy Law, which need clarification before wind development can take off. These issues are now being discussed among relevant government entities in Mongolia, including:

- i) Issues related to the implementation of the Renewable Energy Law:
 - *Power Purchase Agreement:* Power purchase agreements are new to Mongolia. The first independent power producer (IPP) was only introduced at the time of the development of the Salkhit wind farm in 2013. There are many issues related to the legal status and management of the PPAs.
 - *Priority access of renewable energy and compensation for curtailment:* More clarity is needed in the implementation rules for the Renewable Energy Law.
- ii) Issues related to grid integration:

- *Priority access and grid curtailment*: technical solutions and experiences from mature wind markets.
 - *Grid code*: The issues surrounding the grid code and its application need to be clarified. A grid code is a technical specification and standard used by the grid company when integrating electricity from a third party and should not be used as a barrier for the IPPs.
- iii) Issues related to finance of wind farm in Mongolia. There are very limited number of investors active in Mongolia. And they are keen to know different financial models in other countries for wind farm.
- How to attract finance in Mongolia? What are the barriers for attracting investors?
 - How are wind farms financed in other established markets? And what are the experiences gained that can shed lights to the Mongolia's development?

Against this background, we propose organizing a high level workshop with the following objectives:

- a. To provide a platform for stakeholders, including The Ministry of Energy (MOE) and Electricity Regulatory Agency (ERA) and wind developers, to review the current status of the implementation of the Renewable Energy Law and its regulations, against the background of the first wind project having been operational for a year;
- b. To invite European grid companies and regulatory authorities to share experiences on how to implement priority access rules, introducing the grid code, its legal status and content and compensation for curtailment;
- c. To invite stakeholders from other established markets on finance of wind farms in these markets;
- d. To invite potential investors from Europe who are interested in investing in Mongolia.

CONFERENCE OUTLINE (draft)

International Conference on Scaling Up Wind Energy In Mongolia - Renewable Energy Law Implementation, Grid Integration and Finance June 4-5, 2015

Venue: The Corporate Hotel and Convention Center, Ulaanbaatar, Mongolia

4 June 2015

08:30-09:00 Registration

09:00 – 10:40 OPENING SESSION

09:00 – 09:40 Opening speech by **Mr Ch. Saikhanbileg**, Prime Minister of Mongolia
Speeches: **Mr. Zorigt.D**, Minister of Energy and Member of Parliament
Mrs. Oyun.S, Member of Parliament and President of UN Environment Assembly

09:40 – 10:40 Keynote Speeches:

Steve Sawyer, “Global Wind Energy Update and Trend of development”, Global Wind Energy Council, Secretary General;

Paolo Frankl (TBC), “Grid Integration of Variable Renewables (GIVAR) and Harnessing Variable Renewables” International Energy Agency (IEA), Head of Renewable Division;

Nikolaus Schultze (TBC), “Sustainable Financial Mechanisms through Green Investment Service Offering of GGGI” Assistant Director-General, Global Green Growth Institute (GGGI)

10:40 – 11:00 *Coffee break*

11:00 -13:10 **POLICY SESSION: Wind Energy Development in Mongolia and Its current policy**

Moderator: Mrs. Oyun.S, Member of Parliament and President of UN Environment Assembly

Panelists:

1. **Mr.Jon Lyons**, Country Representative, GGGI
2. **Mr.Myagmardorj.E**, Executive Director, Mongolian Wind Energy Association
3. **Morten Dyrholm**, Vestas, VP Global Public Affairs
4. **Speakers from this session**

11:00 – 11:20 **Future renewable energy applications under consideration of wind resource in Mongolia**

Mr.Tovuudorj.P, Director, Department of Strategy Policy and Planning, Ministry of Energy, Mongolia

11:20 - 11:40 **The role of ERA in wind development: How the FIT is determined and how the PPA is assigned**

Mongolia Energy Regulation Administration (ERA)

11:40 - 12:00 **National Green Development Policy Strategic Objective**

Mrs.Munkhzul.Ch, Ministry of Environment, Green Development and Tourism, Mongolia. Officer, Department of Green Development Policy and Planning

12:00 - 12:20 National Green Development Policy Action Plan and GGGI's partnership with Mongolia's -Long Term Energy Scenarios

Ms. Bulganmurun Tsevegjav, Senior Program Officer, GGGI

12:20-12:40 The First Mongolia Wind Farm-Salkhit Wind farm

Sukhbaatar Tsegmid, CEO, Clean Energy LLC

12:40 -13:10 Panel Discussion with speakers and moderator

Issues around the implementation of the RE law in Mongolia:

- PPA
- Grid Curtailment and compensation;
- FIT and surcharge;
- others

13:10 – 14:00 *LUNCH*

14:00 – 15:20 International experiences on wind development: Renewable Energy Law, its implementation and supportive policies

Moderator: Steve Sawyer, Secretary General, GWEC

Panelists:

1. Mr.Angarag.M, Head of Renewable Energy Division, Ministry of Energy
2. Mr.Gankhuyag.D, Chief infrastructure officer, Newcom group
3. Speakers from the session

Format: each speaker will only speak for 3 minutes on their countries' experiences, and will then join a panel discussion.

Denmark's Wind Energy Development and Its Supportive Scheme

Speaker: Naveen Raghavan Balachandran, Vestas, Senior Director, Head of Business Development

Korean's Renewable Energy Development

Speaker: **KyungSeop Han**, Asian Wind Energy Association, President & POSTECH, Professor,

Chinese Wind Development: Experiences and Lessons

Speaker: **Liming Qiao**, GWEC

German's experience on Developing Wind

Speaker: Siemens

14:20-15:20 **Panel discussion**

- What are the good experiences from each market that is key to the success of the high penetration of wind energy?
- Are there any challenges for introducing these policies in Mongolia? And solution to that.
- What are the expectations from the developers?

15:20 – 15:50 *Coffee break*

Launching of GGGI Reports in Mongolia - side event
GGGI Mongolia

15:50 – 17:30 Investment Session: How to attract investment into the wind sector
Moderator: Dana Younger (TBC), IFC

Panelists:

1. Ferrostaal GmbH
2. EBRD or FMO
3. Mongolian Bankers Association or local bank
4. Speaker(s) from the session

15:50 – 16:10 **Current financing situation for Mongolia projects and analysis on different project finance models from other markets**
Speaker: Sebastian Meyer, Azure International

16:20 -17:30 **Panel Discussion: Barriers and challenges for financing wind projects in Mongolia**

Panelist: Mongolia Developer (2 companies), Speakers (3), IFC, Local Bank, others

- What are the key barriers for financing wind farm in Mongolia?
- What are the financing options?
- What risks are preventing investors to come in?
- How can these risks be avoided through better government policy?

17:20 – 17:30 Closing

18:00 *NETWORKING DINNER*

5 June 2015

09:00-10:40 **Grid integration and experiences from established markets**
Moderator: Paolo Frankl, Head of Renewable Division, (TBC) IEA

Panelists :

1. Clean Energy LLC
2. Oyu Tolgoi LLC or Erdenes Oyu Tolgoi LLC
3. Siemens
4. Speaker from the session

09:00 – 09:20 **Current status of the Mongolian grid and future planning: Challenges of integration of wind**

Speaker: Mongolia National Grid or National Dispatch Center

09:20 – 09:40 **Inner Mongolia Grid planning and interconnection with other countries**

Speaker: Inner Mongolia Grid Company, China

09:40 – 10:00 **Danish Case: The reality of 50% wind electricity in the system and wind heating practice**

Speaker: Danish grid company Eneginet.dk (TBC)

10:00 – 10:20 **Solutions to large scale wind applications - Perspective on grid infrastructure and introduction of the Super Grid**

Speaker: Alfredo Parres, ABB, Head of Wind Sector Initiative

10:20 – 10:40 **Integrating wind power into the electricity system**

Speaker: DNV GL

Discussion on

- Grid code
- Integrating flexibility to the grid
- Increasing interconnections between Mongolia and neighboring countries
- Other issues

10:40 – 11:00 *Coffee break*

11:00-13:00 **Concluding session & Visit to the Salkhit Wind Farm**

Tuv aimag/Province outskirts of Ulaanbaatar city (40km distance)